

A process for applying a metallization interconnect structure to a semiconductor workpiece having a barrier layer deposited on a surface thereof is set forth. The process includes the forming of an ultra-thin metal seed layer on the barrier layer. The ultra-thin seed layer having a thickness of less than or equal to about 500 Angstroms. The ultra-thin seed layer is then enhanced by depositing additional metal thereon to provide an enhanced seed layer. The enhanced seed layer has a thickness at all points on sidewalls of substantially all recessed features distributed within the workpiece that is equal to or greater than about 10% of the nominal seed layer thickness over an exteriorly disposed surface of the workpiece.